

Claims

What is claimed is:

1. Artificial turf, comprising:
5 a substrate; and
 a plurality of fibers protruding from the substrate, wherein the fibers
include a chromogen.
- 10 2. The artificial turf of claim 1 wherein the chromogen is thermochromic.
3. The artificial turf of claim 1 wherein the chromogen is stress chromic.
4. The artificial turf of claim 1 wherein the chromogen is chemically chromic.
- 15 5. The artificial turf of claim 1 wherein the chromogen is coated on the surface of
the fibers.
6. The artificial turf of claim 1 wherein the chromogen is included within the core of
the fibers.
- 20 7. The artificial turf of claim 1 wherein the fibers are composed of the chromogen.
8. The artificial turf of claim 1 wherein the chromogen is encapsulated.
- 25 9. Artificial turf, comprising:
 a substrate; and

a plurality of fibers protruding from the substrate, wherein the fibers respond to an increase in temperature by changing from a first color to a second color, the first color and the second color being visually distinguishable.

5 10. Artificial turf, comprising:

a substrate; and

a plurality of fibers protruding from the substrate, wherein the fibers respond to an elastic elongation by changing from a first color to a second color, the first color and the second color being visually distinguishable.

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11. Artificial turf, comprising:

a substrate; and

a plurality of fibers protruding from the substrate, wherein the fibers respond to a change in chemical environment by changing from a first color to a second color, the first color and the second color being visually distinguishable.

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12. The artificial turf of claim 9, 10, or 11 wherein the change in color is substantially reversible.

20 13. The artificial turf of claim 1, further comprising indicia for determining the position of a golf ball.

14. The artificial turf of claim 1, further comprising indicia for marking the boundaries of a sports field.

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15. A color changing material, comprising:
a substrate; and

a film that includes a chromogen, wherein the film responds to a change in environmental conditions by changing from a first color to a second color, the first and second color being visually distinguishable, the film being disposed on a surface of the substrate.

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16. The color changing material of claim 15, wherein the film changes from the first color to the second color along the path of a ball rolling on its surface.